

**ANTAGONISTS OF THE MAGNESIUM BINDING DEFECT AS  
THERAPEUTIC AGENTS AND  
METHODS FOR TREATMENT OF ABNORMAL PHYSIOLOGICAL STATES**

**ABSTRACT**

[0085] This invention provides a class of therapeutic compounds and methods for the treatment of mammals with physiological disorders, such as for example a frequently occurring type of essential hypertension, which are critically associated with the decreased binding of magnesium to the plasma membranes of their cells. These methods consist of administering to a mammal in need of such treatment a compound selected from a series of disubstituted trans, trans 1,3-butadienes, 1,3-disubstituted perhydrobutadienes, 1,2-disubstituted trans ethylenes and 1,2 disubstituted ethanes *and disubstituted propanes*, each of which embodies, in common, the unique structural feature essential for the biological activity of these compounds. This invention also provides for pharmaceutical formulations that employ these novel compounds.